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AUTHOR Heck, Edward J.
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ABSTRACT

Alcohol use by college students (N=582) was examined by means of a confidential survey. Mean age of the subjects was 21.8 years, with a range of 17 to 53 years. Results showed 10.3% to be nondrinkers; the greatest percentage of students were found to be light drinkers. Subjects reported the high school years to be the time period when the majority of students started drinking. The top three places where students drink were off-campus parties, at home, and in local bars. A sizeable percentage of students reported experiencing negative effects of drinking, including arguments, missing school, and indiscriminate sexual activity. Students appeared to be saying that they made their own decisions to drink, reporting relatively low peer pressure. For help sources with alcohol problems, friends, parents, and girl- or boyfriends were rated highest. The university's counseling center received the highest rating for on-campus sources for alcohol problems. (ABL)

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ALCOHOL USE SURVEY OF UNIVERSITY OF KANSAS STUDENTS

Edward J. Heck

University Counseling Center
University of Kansas

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This report is a descriptive summary of the results of a alcohol survey conducted at the University of Kansas. The survey data was obtained during the Spring semester of 1988 and was conducted by the Student Affairs Research Committee.

Sample Characteristics. A random sample of 1000 students was drawn after the 20th day of classes in the Spring 1988 semester by the Office of Institutional Research and Planning. A cover letter, survey form and return envelope was mailed to each student with a three week return date. A total of 582 questionnaires were returned representing a 58.2% return rate. No follow up efforts were made to increase the sample size. Excluded from the sample were special, non-degree seeking students and students on the medical center campus.

A total of 60 (10.3%) of the returned questionnaires were from students who claimed to not have ever had an alcoholic beverage or had one only once or twice in their life. Thus, approximately 90% of the students have either used alcohol at some time or are currently using alcohol.

Table 1 contains various comparative demographic data on the sample and the composition of the 1987 total KU student body.

Table 1
Sample and Population Demographic Characteristics

Characteristics	Sample		KU Students	
	N	Percent	N	Percent
Freshmen	105	18.0	4788	21.3
Sophmore	108	18.5	4181	18.6
Juniors	115	19.7	3842	17.1
Seniors	90	15.4	4595	20.5
5th year UG	34	5.8	321	1.4
Grad./Law	130	22.3	4725	21.0
Males	299	51.3	11589	51.6
Females	281	48.2	10867	48.4

Table 1 (cont.)

Living Arrangement		
Residence/ Scholarship Hall	21.8	36.9
Greek	12.2	7.3
University owned apartment	4.1	1.6
Off-campus	61.7	54.3

The KU population figures are from the previous year (1986-87) as the current figures were not complete at the time of this report. It was assumed that the total student body population composition probably did not change to any significant degree in the one year period. It appears that the sample reasonably reflects the total student body. The sample percentages of freshmen and seniors are slightly lower but the male/female percentages are virtually identical. The living arrangement figures are discrepant and that may be a factor affecting some of the results.

The mean age of the sample population was 21.8 years, with a range from 17 to 53 years. The median age was 21 years.

RESULTS

Item 5 asked students to indicate the period of time when they began to use alcoholic beverages on a regular basis. Table 2 contains the frequencies and percentages for the several time periods. The percentages are based on an N of 522 which is the number of students reporting use of alcohol.

Table 2
Onset of Regular Use of Alcoholic Beverages

Onset Period	Frequency	Percentage
Elementary School	3	.5
Junior High	41	7.9
High School	296	56.7

Table 2 (cont.)

College		
Freshman	109	20.9
Sophomore	31	5.9
Junior	12	2.3
Senior	7	1.3
Grad./Law	12	2.3
Omissions	11	2.1

These figures are quite close to that found in the previously completed drug survey completed on KU students in that the high school years is the time period when the majority of students start their use (Heck, Lichtenberg, & Bentley, 1988). If the high school and freshman years are combined, approximately 77% (alcohol) and 72% (other drugs) of the people who use alcohol begin their use in those time periods.

Item 6 asked students to indicate how often they drank alcoholic beverages. Table 3 contains the frequency of use figures.

Table 3
Frequency of Use (N=522)

Frequency Category	Frequency	Percent
Less than once a week	233	44.6
Once or twice a week	193	40.0
More than twice a week	91	17.4
Omissions	5	1.0

Item 7 asked students to indicate how many drinks do they typically have when they do drink. Table 4 contains the figures on the usual number of drinks per occasion.

Table 4
Number of Drinks per Occasion

No. of drinks per occasion	N	Percent
1-2	174	33.3
3-4	156	30.0
5-6	105	20.1
7+	74	14.2
Omissions	13	2.3

To examine "consumption" patterns the survey was constructed, following the suggestion of Higgenbottom, Bissonette, and O'Shea (1987), using two items (i.e. item 6 & 7) pertaining to the frequency and quantity of drinking. The data on these two items are subsequently cross-tabulated to form six Quantity-Frequency Categories (QFC). Thus, six QFC categories were established as follows:

1. QFC 2- **Occasional Drinker** (1-2 drinks less than once/week)

2. QFC 3- **Light Drinker** (3-4 drinks less than once/week or 1-2 drinks 1-2 times/week)

3. QFC 4- **Light-Moderate** (5-6 drinks less than once/week, 3-4 drinks 1-2 times/week, or 1-2 drinks more than twice/week)

4. QFC 5- **Moderate** (7+ drinks less than once/week, 5-6 drinks 1-2 times/week, or 3-4 drinks more than twice/week)

5. QFC 6- **Moderately Heavy** (7+ drinks 1-2 times/week or 5-6 drinks more than twice/week)

6. QFC 7- **Heavy Drinker** (7+ drinks more than twice/week)

For ease of analysis the 6 categories were collapsed into 3 by combining QFC 2&3, 4&6, and 6&7 resulting in light, moderate, and heavy consumption categories. Table 5 contains the frequencies and percentages of males and females in these three categories (total n=504).

Table 5
Frequencies and Percentages of Males and Females by Consumption (QFC)Category

Category	Males(n=259)		Females(n=245)		Total
	Freq.	Percent	Freq.	Percent	Percent
QFC2+3(light)	101	39.0	140	57.1	47.8
QFC4+5(moderate)	88	34.0	78	31.8	32.9
QFC6+7(heavy)	70	27.0	27	11.0	19.3

A chi-square analysis of the data in Table 5 yielded a value of 25.61 ($p<.001$). The significant differences in the quantity-frequency index is in the light and heavy drinking categories. Consistent with other reports on college students males, are "heavier" drinkers than females.

Hickenbottom et al., (1987) used this QFC category system a 1984 study at the University of Buffalo. Their report revealed an overall heavy drinking rate of 7%, moderate rate of 32%, light rate of 48%, and non-drinking rate of 13%. However, these percentages need adjustment as the non-drinking frequencies were included in deriving their percentages, whereas, in this study, they were not. The adjustment of Hickenbottom's percentages are as follows: Heavy-8.6%, Moderate-36.6%, Light- 54.7%. No results of male-female differences were reported in this study. Assuming the four year difference between the two studies is inconsequential, there appears to be a higher percentage of heavy drinkers at KU than at Buffalo.

The survey presented students with a list of places where they might drink (item 8). Students were asked to rank any or all of the places that pertain to where they currently drink. Table 6 presents the frequencies by

which students' ranked various sites. with a rank of 1 being a place where students most frequently drink.

Table 6
Frequencies of Ranking Various Drinking Sites

Sites	Ranking							
	1	2	3	4	5	6	7	8
Local Bars	96	64	80	57	26	13	4	0
Out of Town Bars	5	23	43	46	51	50	27	0
Private Clubs	15	30	32	36	29	47	32	0
On-campus Parties	71	58	42	25	14	23	39	1
Restaurants	44	61	86	68	55	20	11	1
Off-campus Parties	127	117	71	44	30	7	5	0
Drinking at home	131	97	49	36	23	15	24	1
Other	6	2	2	2	0	1	4	9

The results in Table 6 indicate that the top three places where students drink are: (1) off-campus parties, (2) at home, and (3) in local bars. As expected private clubs or out-of-town bars are considerably lower in the rankings.

Students were asked (item 9) if they had ever experienced certain negative effects as a result of drinking. Item 9 contained twelve negative effects with the first eight effects taken from Smith, Collins, Kreisberg, Volpicelli, and Alterman (1987). Particular attention was given to the last four items that comprise one of the screening tests for alcoholism known as the CAGE (Ewing, 1984; Kinney & Meilman, 1987; Mayfield, McLeod, & Hall,

1974). The CAGE items include: (1) feeling the need to cut down on your drinking, (2) becoming annoyed at criticism of your drinking, (3) feeling guilty about your drinking,and (4) needing a drink first thing in the morning to get up. It is to be noted that while the CAGE has been shown to have a higher sensitivity (i.e ability to identify problem drinkers) and specificity (i.e. ability to not mislabel normal drinkers as problem drinkers) than either of two other screening instruments (Trauma Score and Brief MAST) it still failed to identify 43% of problem drinkers and falsely labeled 15% of all normal drinkers as problem drinkers within a college student population (Smith, et al.,1987). While these researchers do not recommend the use of these instruments for screening purposes, CAGE items were included for potential research purposes. Table 7 contains the frequencies and percentages of students that drink who report the various effects surveyed in item 9.

Table 7
Frequencies and Percentages of Negative Effects

Effect	Frequency	Percent
Missed school	168	32.2
Blacking out	132	25.3
Arguments with close friends	138	26.4
Arguments with boy/girlfriend	174	33.3
Fights while intoxicated	68	13.0
Stealing/damaging property	75	14.4
Indiscriminate sexual activity	164	31.4
Physical Injuries	108	20.7
CAGE ITEMS		
Feeling need to cut down	149	28.5
Annoyed at criticism of drinking	39	7.5
Feeling guilty over drinking	97	18.6
Needing a drink first thing in the morning	3	0.6

It should be noted that while there is no agreed upon or validated reference standard for problem drinking there is general agreement that alcohol use becomes problematic when it results in injurious effects to the individual or to others (Smith et al., 1987). The first eight items sampled some of the more common negative effects of problem drinking. While there

is no way of knowing the frequencies of any of these effects for any individual, it is apparent that a sizeable percentage of those who drink have experienced some negative effects.

The CAGE has a range of possible scores from 0-4 and the literature recommends a score of 2 or more as the threshold cut-off point in screening for alcoholism. An analysis was made of the CAGE data with the following results: 2 items checked (51 or 9.8%), 3 items checked (21 or 4%), and 4 items checked (0). On the basis of prior criterion recommendations and research, if the cutoff score of 2 or greater is used there shouldn't be included (e.g.mislabeled) many normal drinkers in the 13.8% (specificity issue). However, the study by Smith, et al.(1987) suggests that while the "mislabeling" of normal drinkers is no longer a problem, we probably have failed to identify about 80% of all problem drinkers (sensitivity issue). If this should be the case in this sample then it could be concluded that about 86% of the sample represents normal drinkers (defined as students in the lower 40% in amount and frequency of drinking and not having experienced a negative event as a result of drinking).

An analysis was made of the potential sex differences regarding reported alcohol related negative effects. Cross tabulations were analyzed using chi square analyses. The summary data and analysis are presented in Table 8.

Table 8
Sex Differences in Self-Reported Negative Effects

Effect	Percent Male	Female	Chi Sq.
Missed school	50.8	45.6	2.00
Blackouts	28.1	22.0	5.29
Arguments-close friends	25.2	28.0	.59
Arguments-boy/girlfriend	30.0	36.8	4.19
Fights	15.2	10.0	10.76*
Stealing/property damage	20.0	8.0	16.10*
Indiscrim. sex activity	18.2	13.2	4.51
Physical injuries	21.1	20.0	3.93

Table 8 (cont.)

CAGE ITEMS			
Cutdown on drinking	33.7	22.4	15.61*
Annoyed at criticism	8.9	6.0	4.35
Feeling guilty	18.1	18.8	4.58
Needing drink in morning	.7	.4	28

* p< .004

Three of the negative effects items, including one from the CAGE screening questionnaire (Mayfield, McLeod, & Hall, 1974), showed a statistically significant difference between the sexes. Males reported a higher incidence of fighting, stealing and causing property damage, and experiencing a need to cutdown on their drinking. The fact that males either report and/or experience more negative consequences is in accord with other studies (Wechsler & McFadden, 1979; Berkowitz & Perkins, 1987).

Students appear to be saying that they make their own decisions to drink. In response to the question (item 10) asking students to rate the amount of peer pressure they felt at parties and social events to drink (1 being no pressure, 7 indicating extreme pressure), the mean rating of peer pressure was 2.36 (sd= 1.5), with a median of 2.00. Only 20 students (3.4%) indicated moderate to extreme pressure as indicated by a rating greater or equal to 6.

The majority of students indicated that at parties or other social events where alcoholic beverages were served that non-alcoholic beverages were also served. 24% indicated always having an alternative choice, 26.8% indicated frequently having an alternative choice, 20.6% indicated sometimes having an alternative choice, while 13% indicated rarely having an alternative, and 3.1% indicating never having an alternative beverage choice. It would appear that not having non-alcoholic beverages available at social functions is the exceptional case.

While the availability of non-alcoholic beverages at social gatherings seems to be the rule, only 4.6% of the students indicate (item 11) that they always choose non-alcoholic drinks. However, at the other end of the distribution, only 6.7% say that they never choose non-alcoholic drinks (20.1% said frequently, 29.5%- sometimes, 28.4%-rarely).

The change in the Kansas drinking law (e.g. raising the legal age to 21-item 13) does not appear to affect student's drinking habits. Of those students under the age of 21, 70.5% indicated that there was no change in their behavior due to the law. Thus, there is a considerable percentage within the underage group who report not being affected by legal constraints.

In response to the question (item 14) of how often, in the past 12 months, would students estimate that they had driven a motor vehicle while under the influence of alcohol, 36.3% of the students responded never, 33.8% responded one to two times, 11.9% responded three to five times, 6.7% responded six to ten times, and 10.9% responded more than ten times.

The majority of the students (92.7%) responded that no campus activities (e.g. Alcohol Awareness Week, health education programs, pamphlets, etc.) had significantly influenced their use of alcohol (item 15).

The final two survey items asked students to indicate the sources of help they would likely turn to if they felt they had a problem with alcohol. They were asked to rank only their top three choices. Table 9 indicates the percentage of students ranking each of the sources within the top three ranks.

Table 9
Rankings of Help Sources for Alcohol Problems

Sources	Percent Ranks 1-3
On-campus source	31.2%
Girl/Boyfriend	41.0%
Brother/Sister	28.6%
Friends	60.5%
Parents	39.4%
Local Community Agency	24.6%
Clergy	8.7%
Private Physician	18.6%
Other	11.5%

It was not unexpected that students would most likely turn to their friends for help with a problem with alcohol. That is what the research literature consistently shows and what was found in the 1987 drug survey of KU students (Heck et al., 1988). If a student indicated an on-campus source of help in the previous question (item 16), they were asked to further rank-order the top three on-campus sources they would use. Table 10 presents the results for ranking (item 17).

Table 10
Rankings of On-Campus Sources for Alcohol Problems

Sources	Percent Ranks 1-3
Health Education at Campus Hospital	17.3%
Faculty Member	2.9%
Residence Hall Staff	1.7%
University Counseling Center	20.4%
Student Assistance Center	12.7%
Physicians at Campus Hospital	12.5%
Mental Health Clinic at Campus Hospital	9.2%
Psychological Clinic (Clinical Psychology Dept.)	6.0%
Other	.2%

DISCUSSION

At the time of writing this report the author, due to time constraints, decided to essentially report only the basic, descriptive information pertaining to each of the survey items. Obviously there is considerable opportunity for further analysis such as various cross-tabs analyses. We suggest this be done, particularly for living groups, as that sample

parameter seemed to be the most discrepant from the population data and that living arrangement may be significantly related to alcohol use patterns (Hickenbottom, et al.,1987).

The issue of "research comparability" is a very important issue and necessitates the use of common definitions and measures. It is not that uncommon to find discrepancies in different studies which, in part, are due to the differences in definitions and procedures. In the case of thisw study, certain items (i.e. items 6 and 7), concerned with the "quantity and frequency" issue, were modeled after the definitions of Hickenbottom et al. (1987). By combining or completing a cross-tabs analysis of those items a "Quantity-Frequency Continuum" (QFC) was derived which is used to create a six category classification scheme of alcohol use. It was important to use a common metric, such as the QFC index, so as to permit comparative research. While certain comparisons were made with this index, there are a number of further analyses that could be done. Although that is a task for the future, it is interesting to note, for example, that their data for the 1983 and 1984 years indicate a 10% and 13% nondrinking rate; a rate which is comparable to the 10.3% found in this study. This is a very helpful piece of information to know when inquiries are made about alcohol use at the university.

The 10.3% nondrinking figure found in this study is within the range of figures reported in the National Institute of Drug Abuse sponsored study (Johnston et al., 1986). The NIDA study found that college students have above average annual prevalence of alcohol use compared to all high school graduates in their age cohort (92% vs. 89%). If the NIDA figures are used then about 8% of college students are non-users of alcohol which is a slightly lower percentage of non-users than was found in this sample.

How many of the approximate 90% who drink are either problem-drinkers or alcoholic is difficult to determine since there have been demonstrated problems with the CAGE as a screening instrument. However, if certain negative effects data (e.g. the eight negative effects excluding the CAGE items in Table 7) is crossed with QFC data, then a definition of problem drinking is created. In this case "problem drinkers" refers to those students falling in the QFC6+7 who also evidence 3-8 negative effects. In effect, these are students who are in the top two consumption and negative effects categories. Under this criteria there is an approximate 12% problem drinking rate in the student body. Using a similar, but more conservative criteria, Smith et al.(1987) found a 15% rate among freshmen at the University of Pennsylvania.

The issue of "problem drinking" and its effects is a significant area to pursue using a more detailed analysis of the data collected in this study. According to certain reports college administrators perceive declines in the frequency of alcohol-related problems on campuses (Anderson & Gadaleto, 1984,1986). Hopefully the data obtained in this study will provide a base-line of information for future research that will allow comparisons of frequencies at different points in time.

The issue of how to help students who are having alcohol related difficulties is an interesting one particularly from the perspective of university resources. It seems rather clear, in both the drug and alcohol studies conducted on this campus, that the perceived "front-line" of help sources are friends and not university support services. That is not to say that the university's formal or informal services haven't been helpful, but it seems reasonable to conclude that students, when having problems, are most likely to seek initial assistance from their friends. This point seems to be particularly noteworthy and probably should serve as a focal point when colleges devise prevention, treatment, or educational services.

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